REMARKS

Applicant has carefully studied the references cited by the Examiner and the Examiner's comments relative thereto.

Claims 24-43 remain in the application.

Claims 1-23 have been cancelled.

New Claims 24-43 have been added.

Support for the new claims is found in the application as originally filed, for example, in the original claims. A Table of Concordance is provided below for the Examiner's convenience in comparison. No new matter has been added.

Table of Concordance:

New Claim	Original claim	New claim	Original claim
24	1, 2, 3, 12, 13	**34**	9
25	4	**35**	10
26	5	**36**	11
27	5	**37**	14
28	6	**38**	15
29	6	**39**	16
30	5, 6	**40**	17
31	7	**41**	18
32	7	**42**	19
33	8	**43**	20

Hence, new Claim 24 mostly corresponds to original Claim 1; however, the deficiencies mentioned by the Examiner in the pending Office Action have led to the corresponding amendments. In detail, the subject-matter of original Claim 1 has been amended by incorporating the clarification, according to which the inerting level corresponds to the re-ignition-prevention level (R). Support for these amendments can be found, for example, in Claim 2 as originally filed.

In addition, the subject-matter of original Claim 1 has been amended by incorporating the clarification, according to which the upper threshold of oxygen content in the regulation range is smaller than or, at maximum, equal to the re-

ignition prevention level (R). With respect to the disclosure of this additional feature, we would like to draw your attention to the wording of original Claim 3.

Finally, the subject-matter of original Claim 1 has been amended by clearly pointing out that the time (x) for lowering the oxygen content to the inerting level is preset, wherein this time (x) is selected depending on a base inertisation level at the time the flooding begins. Support for this clarification can be found in the original specification, for example, in original Claims 12 and 13.

In the outstanding Office Action, the specification was objected to as failing to provide proper antecedent basis for the claimed subject matter "the n50 value". Likewise, original Claims 5 and 6 were rejected under 35 U.S.C. 112, first paragraph, for reciting "consideration of the n50 value of the target area". The Examiner's attention is respectfully drawn to the fact that the n50 value is clearly defined in the application as originally filed, for example, on page 10, third paragraph to page 11, first paragraph. Accordingly, the objection to the specification and the rejection under 35 U.S.C. 112, first paragraph, of original Claims 5 and 6 (new Claim 30) should be withdrawn.

In the pending Office Action, the Examiner holds that the subject-matter of the present application is already known from the prior art, or otherwise rendered obvious by the prior art. In this regard, he has drawn attention to document US 2002/0040940 A1 *(Wagner et al)*. Although these rejections are now moot in light of the amendments carried out, we will nevertheless discuss in detail why the cited prior-art documents cannot render the subject-matter of the present application obvious.

As to the present invention:

The present invention is directed to an inerting method for extinguishing fire in a closed room whereby the oxygen content in this room is reduced in a *given* time to a specific inerting level. In this regard, the oxygen concentration in the closed room is lowered to a value at which the flammable material contained in the room will no longer ignite.

As already discussed in the introductory portion of the specification as originally filed, the temporal sequent of fighting the fire when utilizing an inerting method is essentially divided in two stages:

i) the fire-fighting stage; and
ii) the re-ignition prevention stage.

The fire-fighting stage is that phase during which the target room is flooded with an oxygen-displacing gas in order to obtain a concentration of supplied inert gas capable of extinguishing the fire in the target room. The concentration capable of extinguishing a fire is defined as that concentration at which fire can be excluded with certainty. The extinguishing concentration is lower than that of the so-called re-ignition prevention level and corresponds, for example in electrical switching and distribution areas, to an oxygen concentration approximately 11.2 % by volume.

On the other hand, in the fire-fighting stage, the oxygen concentration must reach the so-called re-ignition prevention level within 60 seconds of starting the area flooding. The re-ignition prevention level is an oxygen concentration at which a renewed igniting of the material accommodated within the target room can only just be excluded. The oxygen concentration at the re-ignition prevention level is a function of the target areas fire load and is, for example an electrical switching in distribution areas, an oxygen concentration of approximately 7.8 % by volume.

The problem underlying the present invention is to provide an inerting method of extinguishing a fire by means of which the inert gas fire-extinguishing system used with the inerting method can be designed exactingly as possible in particular, the most precise dimensioning possible to the inert gas to be provided, while simultaneously complying with the required fire-fighting stage and re-ignition prevention stage involved in the extinguishing fire.

For this purpose, new Claim 24 of the present application stipulates an inerting method for extinguishing a fire in an enclosed room in which the oxygen content in the closed room is reduced *within a given time* to a specific inerting level.

On the other hand, new Claim 24 defines that the inerting level is *kept to a certain level within a given regulation range* wherein the upper threshold of oxygen content in the regulation range is smaller or, at maximum equal to the re-ignition level.

This specific inerting method is clearly neither anticipated nor made obvious from the prior art. In this regard, we would like to comment as follows.

As to document US 2002/0040940 Al:

The document US 2002/0040940 Al is directed to an inerting method for reducing the risk of and for extinguishing fires in an enclosed area. The conventional inerting method comprises two steps. At first, the oxygen content in the enclosed space is reduced to a selected base inerting level, and in the event of a fire, the oxygen content is further reduced to a selected complete inerting level. In this regard, reference is made to paragraph [0008] of US '940 Al,

It is important to know that the base inerting level mentioned in US '940 Al corresponds to an oxygen content which is higher compared with the oxygen content of the re-ignition prevention level. However, the complete inerting level corresponds to an oxygen content which is smaller than or, at maximum, equal to the re-ignition prevention level.

With respect to the complete inerting level, US '940 Al teaches a person skilled in the art that, in case of a fire, the oxygen content in the closed room is reduced from the base inerting level to the complete inerting level rapidly. In this respect, reference is made to paragraph [0024] of US '940 Al which reads as follows:

> *If a fire characteristic is detected and, with the usual safety loops, recognized as fire, the space is rapidly flooded with nitrogen from steel cylinders until a desired oxygen concentration is obtained. That concentration was previously determined on the base of the ignitable materials."*

In other words, US '940 Al teaches a person skilled in the art to reduce the oxygen content in the closed room rapidly to the complete inerting level. In

contrast, the subject-matter of Claim 24 clearly stipulates that the oxygen content in the closed room is reduced within a given time to a specific inerting level, wherein this specific time is selected depending on a base inertisation level at the time the flooding begins.

Apart from this difference, US '940 Al is completely silent with respect to the specific aspect, according to which, after flooding the closed room, the inerting level is kept to a certain level within a given regulation range wherein the upper threshold of oxygen content in the regulation range is smaller than or, at maximum, equal to the re-ignition prevention level. In fact, US '940 Al only teaches a person skilled in the art that the target room shall be flooded with an oxygen displacing gas in order to reduce the oxygen content in the target room such as to prevent re-ignition. However, this prior art does not teach a person skilled in the art to keep the inerting level to the re-ignition prevention level within a given regulation range.

For this purpose, US '940 Al cannot be novelty-destroying with respect to the subject-matter of the present application,

Also, the subject-matter of the present application is not obvious in light of the prior art because the above-discussed distinguishing features are also not known from the other documents cited by the Examiner.

As to document US 6,095,251 B:

Even if US 6,095,251 B describes in column 2, lines 40 to 42 that generally from six or seven seconds are required to inert a fire, extinguishing it and suppress it's re-ignition, this prior art does not teach a person skilled in the art to select the time for lowering the oxygen content pending on a base inertisation level at the time the flooding begins.

In addition, US '251 B is silent with respect to the specific aspect, according to which, after flooding the target room, the inerting level is kept within a given regulation range, in particular, the re-ignition prevention level.

Conclusion:

In these circumstances, the Applicant believes that the new claims as attached herewith shall be allowable. Accordingly, a Notice of Allowance is respectfully requested. If the Examiner believes that personal communication will expedite prosecution of this application, the Examiner is invited to telephone Applicant's representative at (419) 874-1100.

Respectfully submitted,

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